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ABSTRACT

This report presents research findings concerning house systems in four New York city high schools during the 1988-89 school year. Quantitative analyses compared small and large schools with both weak and strong house designs. Findings indicate that house systems with more complete designs had more positive effects on staff and students and outperformed weak ones in large schools on most measures, including students' relationships with peers, teachers, and support staff; extracurricular participation; sense of community; academic performance; and teachers' knowledge of students' all around performance. Additionally, systematic observations of students' school experiences reveal that well designed house systems were conducive to staff teamwork and students' punctual arrival at class. Overall, the study shows that the house systems constitute a more effective form of high school organization. The limiting factor associated with house systems has to do with their requirements for implementation. House systems are incompatible with current organizational structures, and school staff must have the assistance of district officials and principals' and teachers' unions to replace them. Finally, house systems can do nothing to address the inadequacy of the buildings in which students and staff presently work. An appendix provides the psychometric properties of study measures. (GLR)

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Diana Oxley, Ph.D.

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in Human Development and Education

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This report is based on a project carried out by the author at Bank Street College of Education with the assistance of the following staff members:

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EXECUTIVE SUMMARY

The following report presents the findings of research conducted on house systems in four New York City high schools during the 1988-89 school year. These schools were in the first and second years of implementing their house plans in response to a citywide policy which directed all New York City high schools to establish a house system at the ninth grade level and encouraged them to extend the plan to upper grades on a year by year basis. The research was designed to support the schools' efforts through the development of information about essential components of successful house systems and their requirements for implementation. The study was conducted as part of a program of research and advocacy by Bank Street College of Education and The Public Education Association (PEA). This report accompanies a PEA document containing policy recommendations for restructuring New York City neighborhood high schools.

House systems are not a new reform concept. They have resurfaced as a important means of addressing problematic features of high school organization, including large size, fragmented curriculum, and an impersonal, alienating climate. National advocacy organizations such as the National Coalition of Advocates for Students, the Committee for Economic Development, and the Carnegie Foundation for the Advancement of Teaching have argued that house systems have particular relevance for inner city schools where these conditions are magnified. The research described here provides extensive documentation for this claim.

The in-depth analysis of New York City house systems and review of the literature indicate that the following features are critical to the success of house plans.

- Schools are organized into house units with no more than 500 students and a core teaching staff which instructs most, if not all, students' courses throughout their stay in school.
- Houses are divided into subunits containing an interdisciplinary teacher team and enough students to allow team members to instruct their required classload within the subunit.
- Student support staff are attached to each house, work exclusively with house students and collaboratively with each other and instructional teams.
- Extracurricular activities are organized within each house to give students more opportunities to participate in school life and to develop valuable skills not ordinarily pursued in the classroom.

- House classes, activities, and staff offices are physically located in adjacent rooms within the school building.
- Houses operate in a semi-autonomous fashion with the capacity to determine house policy, select staff, allocate resources, and discipline students.

Quantitative analyses compared small and large schools with weak house designs to small and large schools with strong designs on both direct and indirect effects predicted on the basis of theory. Weak designs incorporated the 2nd, 3rd, and 4th items listed above to varying degrees, while strong designs included the 1st-4th items. None of the schools successfully implemented the fifth feature. Findings indicated that house systems or houses with the more complete designs had more positive effects on staff and students than others. Well designed houses irrespective of school size outperformed weak ones in large schools on most measures, including students' relationships with peers, teachers, and support staff, extracurricular participation, sense of community, academic performance, and teachers' knowledge of students' all around performance. Well designed houses performed as well as the weakly designed house system of the small school on most measures and better than the small school with respect to sense of community and teachers' knowledge of student performance. The potential benefits of the plan for staff were not realized to the same extent as for students attributable in part to the failure to empower house coordinators and staff.

Examination of staff's efforts to implement house plans revealed that academic departments, tracks, and special programs posed significant obstacles. Department supervisors' authority competed with house coordinators' will to coordinate instruction across disciplines; and the practice of offering multiple programs and courses of varying difficulty levels requires drawing students across houses, making it difficult to keep house students and staff together for instruction. In schools with better implemented house systems, staff eliminated some programs and tracks and resolved the tension between departments and houses by integrating the two to some extent. In all schools, however, house systems uneasily coexisted with the traditional school structure. Alternative authority structures and a less diversified curriculum are clearly needed to implement house systems fully.

Further, systematic observations of students' school experience revealed that well designed house systems were conducive to staff teamwork and students' punctual arrival at class. Across all schools, however, school routine was dominated by negative qualities, including a pattern of unproductive attempts by teachers to control student disruption, an unsupportive physical environment, and students' poor verbal self-expression; only students' show of resilience in the face of stressful family backgrounds and unrewarding school

experience emerged as a positive feature of school life. The observation that some teachers proved able to channel this resilience effectively points out the usefulness of placing such teachers in teams where their skills can be shared with others.

In sum, these findings are consistent with the view that house systems constitute a more effective form of high school organization. Whereas the traditional organization of high schools can be likened to assembly line work in which workers have narrow responsibilities and limited identification with the end product, house systems organize professionals across disciplinary lines, including those drawn between student support and instruction, for purposes of working collaboratively toward the goals of a group of students they share and know in common. The limiting factor associated with house systems has to do with their requirements for implementation. House systems are incompatible with current organizational structures, and school staff must have the assistance of district officials and principals' and teachers' unions to replace them. Finally, house systems can do nothing to address the inadequacy of the buildings in which students and staff presently work.

HIGH SCHOOL HOUSE PLANS 1988-89

We conducted our study of house systems in four neighborhood comprehensive high schools located in The Bronx, Manhattan, and Brooklyn. These schools' house plans were among the most well developed of all the neighborhood high schools according to our own assessments as well as those of the borough superintendents' staff. We confined our study to neighborhood schools, as opposed to magnet academic and vocational schools, in order to learn how house systems need to be designed to be effective with student populations composed mostly of economically disadvantaged and underachieving youngsters.

Each school's house system is described below. Pseudonyms are used to guarantee confidentiality as a standard condition of schools' participation in research. The differences in the design of the house systems across the four schools are quite strong. The significance of these differences for student and staff functioning is evaluated in later sections.

House System Profiles

Manhattan Large

Manhattan Large serves a largely Hispanic student population of 3,000, many of whom have limited English proficiency. Administrative staff developed a house system plan one year prior to the Board of Education's mandate. Their first step was to make each of the school's existing academic programs into a house by assigning as near full a complement of support staff, including house coordinator, deans, counselors and family assistants, to each house as possible. Since some students did not belong to a particular program, new program areas were created to accommodate them. While the preexisting programs were organized on the basis of particular student academic problems or propensities, nearly all the house designations, if not curriculum, reflected a career or post high school employment theme, e.g., Business, Entrepreneurial.

Some programs with categorical funding (e.g., the Bilingual Program) provided for support staff, such as guidance counselors and family assistants, as a long-standing feature of the program. In other cases, at-large guidance counselors were given specific house assignments. Similarly, house coordinators were program supervisors supported by program funding. Most taught two to three fewer classes to carry out administrative functions. In sum, existing support staff were reorganized more completely around houses under the new plan,

although some deans retained their buildingwide assignments. To support the reorganization, house offices (sometimes a converted classroom) were established to locate all support staff of a house together.

Teachers were not assigned to houses except in the special education and dropout prevention houses. This practice had less to do with design than the complexity of class scheduling: Teachers instruct a highly differentiated array of courses at particular grade and difficulty levels, which necessitates drawing students across houses to fill classes to acceptable sizes.

Houses contained varying numbers of students determined by the nature of their underlying program. For example, the Employment Skills Training House, formerly the bilingual program, was the largest with over 1,000 students, while the Medical/Health House contained only 450. Despite the large variation in the number of students in each house, the number of support staff assigned to each house did not necessarily correspond to house size, reflecting, in part, program constraints.

Each house coordinator organized extracurricular activities for his/her students as a means of providing them with more opportunities for recognition and involvement. The activities, which did not duplicate the schoolwide program, consisted of assemblies held to award students for good grades and attendance; field trips; and in some houses, newsletter production and the distribution of house T-shirts.

Central school administrators recognized the need to make the curriculum, as well as support staff, more responsive to students. The assistant principals in charge of the academic departments were largely unsupportive of the house plan because they felt it was more concerned with student support than achievement. As a consequence, they were viewed as a barrier to curriculum revision, and in the second year of the house system an interdisciplinary cadre of 9th grade teachers was created to develop new instructional approaches. Ninth grade was targeted because it is viewed at Manhattan and across the city as the point at which a critical mismatch between students' need for engagement and the qualifications of teachers exists. Supplemental funds were used to free each of these teachers of one course, both as a means to attract experienced teachers who normally instruct upper level courses and to allow them to explore and implement new concepts.

Brooklyn Large

Brooklyn Large, much the same size as Manhattan with a student population of around 3,000, is, however, composed predominantly of black youths and a somewhat smaller proportion

of limited English proficient students. Its house system originated with the formation of three new sub-schools, Humanities, Science, and Business, and the designation of a long-established performing arts program as a fourth sub-school. Students can select any of the first three sub-schools, but must audition for the fourth.

Under the Brooklyn plan, the primary goal was to establish a few sub-schools defined by different curriculum areas. Students take the same core courses across sub-schools, but are exposed to a special curricular emphasis or theme corresponding to the sub-school name in a course or courses.

Categorical educational programs such as bilingual and dropout prevention have been retained, but the principal has tried to integrate them into the sub-school plan by assigning them to different sub-schools where students may take some of their courses.

Assistant principals in charge of the academic departments represented in the sub-school plan supervise the sub-schools, and a teacher in each of the four departments serves as sub-school coordinator. In some cases the assistant principal, along with the coordinator and paraprofessional(s), share the department office which serves as the sub-school hub. Classrooms in which the sub-school theme is taught are located near the office.

In contrast to Manhattan, support staff have been organized around the sub-schools only partially; many retain buildingwide responsibilities in addition to a sub-school assignment. A small core of teachers is assigned to each sub-school, typically one in each core subject area per grade; they teach some but not necessarily all of their classes in the sub-school. The chief means by which the principal chose to address the need for increased student support was by reducing class size to 25 and having teachers act as case managers for one period a day in place of teaching a class. During this period, teachers are required to meet with one or several of their caseload of 24 students to provide guidance and support. Teachers discuss and monitor student's attendance and punctuality, class performance, and homework completion.

Although at least some of the assistant principals of academic departments play a central role in the house system, their support of the plan varies as does that of the instructional staff. Again, much of teachers' resistance to the plan concerns its focus on student support, specifically the use of teachers as case managers. As a consequence, sub-schools reflect varying degrees of effort to create a more supportive and cohesive context in which to conduct instruction.

In the Humanities sub-school, an entirely different teaching format was developed for ninth graders to ease their transition to high school. Two clusters of 100 students, each subdivided into four classes of 25 students and taught by a team of five ninth grade teachers, are headed by a ninth grade coordinator. Students belonging to a cluster are blocked together

for some courses to allow for double periods of English/Social Studies and Math/Science and the possibility of team teaching. In order to accommodate double and sometimes triple periods, classes are run on a different schedule than the rest of the school for part of the day. Students take a fifth course whose theme is "discovery of self" and whose content is oriented to preparation for employment. Students take the five core courses in a wing of the building where the coordinator's office is also located.

Across all sub-schools, coordinators organize extracurricular activities for their students, including field trips, awards assemblies, student performances, speakers, and newsletters. Like Manhattan, the object of these activities is to recognize individual achievement, extend classroom learning into non-classroom contexts, and strengthen students' identification with the sub-school.

Bronx Intermediate

Bronx Intermediate, with nearly 1,700 students, is almost half the size of the two schools described above. Roughly two-thirds of the students are Hispanic and the rest black. Unlike the "vertical" house plans of Manhattan and Brooklyn, where students in grades 9-12 are placed in each house, Bronx Intermediate has a "horizontal" plan whereby students at the same grade level are grouped together in a house.

A full complement of support staff, comprised of an assistant principal, house coordinator (grade advisor), guidance counselor, dean and paraprofessional, are assigned to each house and remain with the same students as they progress through their four years of high school. Coordinators are in charge of organizing house activities which are geared to rewarding students for excellence. The dean handles student disciplinary matters arising within the house, the counselor takes care of course scheduling, and the paraprofessional monitors attendance. A large office area is provided for the house support staff with the exception of the assistant principal who has his/her own department office.

The houses are not differentiated with respect to curriculum and are identified purely on the basis of current grade level. Curriculum reform, however, is the centerpiece of the house plan. Bronx Intermediate used federal Chapter 1 funds to implement a new "schoolwide" program. Under an exemption included in recently revised Chapter 1 program requirements, schools may involve all students in an intensified academic program if 75% or more of the students in the school meet poverty criteria.

Beginning with ninth graders, students are organized into clusters of 100 which are further subdivided into classes of 25. Teams of four teachers are assigned exclusively to each

cluster; they instruct all of their required five classes within the cluster and in classrooms located in a single area of the building. Students in each class are blocked together for six periods each day, including lunch. Their class schedule allows them to take a daily double period of one of four core courses (English, Social Studies, Math, and Science), the subject of which alternates each day on a 4-day rotation cycle. With this schedule, students receive an extra period of instruction per week in each core subject area. The extra period is used variously to slow the pace of instruction, provide more individualized attention, etc.

Members of each instructional team are programmed to have up to three free periods a day in common, including lunch, but are required to meet together only once a week. One team voluntarily met nearly every day at lunch to discuss students and instruction. Teacher teams are expected to develop a more integrated core curriculum. In many instances they successfully synchronized their lessons so that subject matter or skills taught in one course were simultaneously reinforced in another. For example, when students the Global History class were introduced to Africa, they took up African literature in English class.

One class in each cluster is designated an honors class to create more homogeneous groupings. At the same time, students meeting dropout risk criteria are served under the cluster plan since it is viewed as providing the same level of support as dropout prevention programs (which are structured along similar lines) without labeling students. Bilingual and Special Education students are served in separate programs.

When students begin their second year of high school, irrespective of whether they are promoted to 10th grade, they remain together as a cohort and are again assigned to a class of 25 within a larger 100-student cluster and to a 4-member teacher team. Clusters and classes within clusters are more differentiated at the 10th grade level to accommodate students' differing levels of course mastery and need to prepare for state exams. Teachers may opt to follow students from 9th to 10th grade, but many of the 9th grade teachers are not qualified to teach the advanced classes.

Bronx Small

Bronx Small is the smallest of the schools studied, with a student population of close to 1,000. Although Bronx Small is only one-third the size of Manhattan, it resembles the latter very closely in that nearly all students are Hispanic and a large proportion are limited English proficient. At the time of our study, Bronx Small's house system represented only a limited attempt to create smaller, more supportive student-staff groupings within the larger school; it has since implemented a more comprehensive house plan. It is included in our study because

it allows us to compare a relatively small school with large schools which, in essence, have tried to simulate the benefits of small schools through a house system.

Ninth and tenth grade students not belonging to bilingual or special education programs were placed in class-size groups which met with a teacher coordinator for one period a day. Each group had a name corresponding to a career interest, such as business and health. The classes followed a relaxed and informal format in which students actively participated in discussions related to the career theme of their house as well as personal and social issues of concern to this age group. Coordinators worked closely together and sometimes exchanged classes to expose all students to a coordinator's area of expertise. No other special arrangements with support staff or teaching staff were made for these students.

Issues Of Design And Implementation

The house systems described above exhibit sharp differences in design. These differences reflect both differing degrees of reorganization and the use of diverse strategies to achieve the same goal. The overriding distinction among the four schools' house plans has to do with degree or depth versus superficiality of the intervention. Depth depended on whether administrators sought to reorganize staff into more effective student support systems only or whether they sought to create a more cohesive educational format as well. Manhattan Large and Bronx Small are examples of house systems in which staff have been organized to provide students with more regular and consistent support, while leaving the structure of academic programs in tact. Brooklyn Large and Bronx Intermediate incorporated both a more tightly organized student support system and, in part, a restructured academic program. Both aspects of reorganization, support staff and instruction, along with several others, are analyzed in greater depth below.

Instruction

House Instructional Staff

A Division of High School memorandum indicated that teachers should be organized more or less exclusively around houses and that students, accordingly, would take most if not

all of their classes within house.¹ School staff found it extremely difficult to do this, however, and demonstrated only limited success in two of the schools we studied even though we selected four of the most well developed house systems the neighborhood high schools produced.

Multiple academic programs and ability grouping as barriers to implementation.

Expressed succinctly, it is not possible to organize teachers and classes around houses within the existing context of multiple academic programs and courses differentiated with respect to difficulty levels. The effect of both of these pervasive and long-standing features of the neighborhood high schools is to reduce the size of the pool from which students can be drawn to create classes of acceptable size; students must be drawn from across the school to fill courses. Houses reduce the pool of eligible students to the point of making it impossible to offer the same array of courses within house. Thus, the existing curricular program and the house system are at fundamental odds with one another.

In order to preserve the integrity of the house system by allowing students to take their classes within house, school staff must eliminate special academic programs and accommodate more heterogeneous student ability groups within classes. The staff at Bronx Intermediate did this to some extent. First, by creating a horizontal house system they maximized the number of students within the house available for courses at a given grade level. Second, instead of creating a separate academic program for students in the dropout prevention program, they included these students in the house. Other programs, like bilingual, were left intact, however. Third, in the ninth grade house at least, the staff created two different ability tracks, above grade and at or below grade level, but these were not assigned to different teacher teams which had equal numbers of classes of each track. In this way about 75% of incoming ninth graders received instruction in house for five of seven courses.

At Brooklyn Large, staff were more limited by the vertical house arrangement and by the dropout prevention program which entailed a separate academic program. Nevertheless, the Humanities House succeeded in keeping ninth grade students in house for five of seven courses. Humanities students accounted for roughly 40% of incoming ninth graders. The small number of house students made it impossible to offer a higher sequence math course across both teacher teams, so students eligible for this course had to be assigned to one team. Students were regrouped across the two teams to accommodate courses of differing ability levels in reading and hygiene. Not surprisingly, the special arrangement made for Humanities ninth graders

¹ Division of High Schools. (1987). The Ideal House. New York: New York City Board of Education.

created enormous controversy because it complicated programming for other ninth grade level students; it is at permanent risk of being eroded.

As stated above, eliminating or reducing the segregation of students into special academic programs and classes of differing ability level goes against the grain of long-standing practice. The neighborhood high schools are not alone in the use of ability tracking, but unlike other schools, they have become almost entirely a collection of categorical programs which serve the large numbers of students with diverse special needs attending these schools.

Although research has strongly documented the benefits of mainstreaming² and cooperative learning,³ schools, in general, have been slow to institute these strategies. Teachers find it difficult to accommodate students with special needs along with other students in classes of 34. Clearly, teachers require training and additional supports to instruct such classes successfully. The implementation of full and complete house systems bring staff face to face with these issues. It seems quite clear that the High School Division failed to anticipate the implications of the house system for schoolwide restructuring.

Interdisciplinary Teacher Teams

House sub-units. Bronx Intermediate and Brooklyn Large structured the educational program of 9th graders nearly the same. An interdisciplinary teacher team of four to five was assigned to a 100-student cluster subdivided into four classes of 25. Special funding sources were used to reduce class size from 34 to 25. Team members instructed all their required classes (five) within the cluster. At Bronx Intermediate, each teacher in a 4-member team gave instruction in his/her subject area (English, Global History, Math, and Science) to the four classes each day plus an extra period back to back with another to each class on different days. At Brooklyn Large, each teacher in a 5-member team taught four classes (either English, Global History, Math, Science, or Freshman Discovery) and carried out case management during their fifth period.

The educational advantages of the teacher teams are many. The interdisciplinary teams share a group of students in common. Therefore, their knowledge of students can be pooled

² Wang, M., Reynolds, M. & Walberg, H. (1988, November). Integrating the children of the second system. Phi Delta Kappan, 248-251.

³ Newmann, F. & Thompson, J. (1987, September). Effects of cooperative learning on achievement in secondary schools: A summary of research. Madison, WI: University of Wisconsin - Madison.

to diagnose both academic and personal problems and to design interventions and use them consistently across a student's classes. Second, the interdisciplinary teams provide a vehicle for integrating different curricula so that skills and information taught in one course can be reinforced in another and so that students can more readily see and appreciate the real world interdependence among subject areas.

An element that may be crucial to the functioning of these teams is that teachers instruct a total of 100 students, instead of a possible 170 under the usual 5-class x 34-student format. The smaller number of students was achieved by having teachers spend their fifth period with students in the 4-class cluster and by reducing class size. With fewer students, teachers do not have to limit themselves to multiple choice tests and other time-saving devices with less instructional value; they can give more writing assignments and individual feedback to students.

Evidence that teacher teams worked effectively together was mixed. At Bronx Intermediate, one team met daily at their common lunch break to discuss students, synchronize their curricula, and develop clusterwide activities for students. This team felt they got to know their students better and that this had led to increased contact with parents. The team helped students create their own family trees and organize a Black History housewide assembly. One member of the team, a new teacher, felt his teaching had greatly improved through his collaboration with supportive team members. Curriculum integration occurred to a limited, but not insignificant extent, usually in the context of English and Social Studies where teachers linked history lessons with readings in related literature.

Not all teams collaborated as well, however. In particular, Science and Math teachers under pressure to prepare students for comprehensive exams found less time to engage in teamwork. Moreover, teams lacked leaders with authority to supervise team teachers. House leaders, who were departmental assistant principals, had no authority over teachers in their house who belonged to other departments.

Team versus department authority. One clear requirement for the effective functioning of interdisciplinary teams is the creation of a supervisory mechanism that gives as much authority to teams as departments. In fact, it can be argued that teams, by virtue of their being responsible for nearly, if not all, the educational program of students, should exercise more clout than departments. Teams as the group of teachers with the greatest knowledge of students need to be empowered to respond to students directly.

The creation of houses and teacher teams signals a shift from a subject-centered to a student-centered approach to education. Subject-centered education has been the object of

criticism by prominent educators both currently and in the past.⁴ Without a redistribution of power to support new student-centered structures, however, they will be neither effective nor long-lived.

At the same time, teams need to rely on department supervisors to support teamwork through their continued efforts to develop new curriculum and to see that standards are met across teams.

It is clear from our study of house systems that departmental supervisors, in general, have not embraced the plan. Their lack of support accounted for the uneven development of houses within schools, uneven participation of teachers in instructional teams, and difficulty in making academic reforms more integral to houses. Many view the house system concept as identified with an undue regard for student support to the detriment of academic standards. To some extent, they are justified in this view, given that the house plan initiative focused more directly on attracting students and enhancing student retention and attendance than academic performance.

Even where individual house plans gave more attention to the educational program and/or made department supervisors house leaders, however, their support for the plan was not uniformly strong. It may be that, regardless of the design of the house system, department heads view it as displacing the dominant departmental structure of school. In a related way, department supervisors may also perceive interest in the house system and the critique out of which it grew as a rejection of their methods. As a desirable and corrective course of action, school staff should seek to place the academic program at the center of the house plan and clarify the roles of departmental supervisors and others in its development and maintenance.

Blocked programming. Only Bronx Intermediate blocked students at the classroom level as a consistent feature of their academic program. Brooklyn Large intentionally avoided blocking at class level, but blocked students at the cluster level so that the instructional team shared the same group of students. The claim for blocked classes is that it stabilizes the social context in which learning occurs. A constant student group may provide fewer distractions than one which forms itself anew each class period. Staff at Brooklyn Large on the other hand feared that blocked classes would create an overly familiar atmosphere conducive to greater student disruptions.

Our classroom observations failed to detect differences in the disruptiveness of classes across blocked and unblocked arrangements. Similarly, our survey of teachers across the four

⁴ Cohen, D. (1985). Origins. In A. Powell, E. Farrar & D. Cohen (Eds.), The shopping mall high school. Boston: Houghton-Mifflin Co.

schools did not reveal differences in teachers' perception of the disruptiveness of classes composed of blocked versus unblocked students.

One goal of instruction necessarily includes teaching students to work together as a class. In classes of mixed ability groups, collaboration becomes even more crucial. It seems likely that students would perform better as a class as their knowledge of one another increased through spending uninterrupted class time together. Students could better predict how others would react to them and from whom they could obtain help. Moreover, keeping class groups the same across courses may minimize the time it takes a class to settle down to work each period. In short, blocking provides a more student-centered vehicle for instruction because it gives students a more active and powerful role in the process. Blocking students at class or, as a compromise, cluster level seems not only consistent with the house system concept but an important means of realizing it.

Co: non planning time. In order for an instructional team to function effectively, its members need to share a free block of time in common. In the initial stages of their development, teams may need to meet almost daily to develop a cohesive instructional strategy. Members of each team at Bronx Intermediate shared two free periods plus lunchtime in common. Although teachers did not use all this time to meet in teams (they were expected to meet only once a week), they had a great deal of flexibility in choosing times to meet. Since all teachers ordinarily have two free periods per day for planning by contractual agreement, finding time for teamwork is partly a matter of programming.

Some teachers maintained that their allotted free time which they used to plan and correct students' work did not allow time for teamwork. Indeed, some administrators felt that the demands of teaching at the ninth grade level were so keen given the unsettledness of ninth graders that teachers' classload should be reduced from five to four to accommodate teamwork. At Manhattan Large, reducing classloads to four in exchange for teamwork was used to attract better teachers to the ninth grade, where teachers unable to teach higher grade level courses ordinarily end up by default.

Ninth Grade Instructional Teams

A corps of teachers who instructed ninth grade courses exclusively was created in three of four schools studied. The rationale for this was the staff's view that ninth grade presents a special challenge which must be met by teachers with appropriate skills. Appropriate skills were considered to be a combination of strong mastery of subject matter and ability to engage

less motivated students. Another factor contributing to the creation of ninth grade teams was the High School Division's policy which required houses at the ninth grade level only.

In most neighborhood high schools, the entering ninth grade class is by far the largest class in school given the high rate of dropping out between ninth and tenth grades. For this reason, ninth grade contains a large number of students at risk of dropping out, many of whom already manifest low motivation, attendance, etc. On the other hand, upper grade level students include, by definition, a high proportion of persevering students whom teachers find easier to teach. As a result, teachers whose experience and ability to teach upper level courses permit eschew ninth grade courses. A problem that had to be solved, then, in creating ninth grade instructional teams was attracting the more experienced teachers. As stated above, administrators in one school offered a lighter teaching load to teachers willing to teach ninth grade only.

The practice of creating ninth grade instructional teams seems short-sighted at best; at worst it exclusively pairs the neediest students with the weakest teachers. Even if ninth grade teams successfully incorporate some of the strongest teachers, a permanent ninth grade teacher corps closes off the possibility of permitting teacher teams to travel with students from grade to grade. Thus, teachers cannot apply their steadily accumulating knowledge of students consistently across years; they are cut off from direct knowledge of upper grade level needs and are not likely to feel accountable for such needs; and they must teach the same courses year after year. Further, if teacher teams remained with their students from year to year, each would have equal claims on teachers able to teach upper grade level courses.

Student Support

We observed essentially three different models of student support and guidance in use across the house systems in our study. One school, Manhattan Large, employed a vertical system whereby support staff were assigned to houses containing students at all grade levels. By this method, support staff served a more or less constant number of students among whom outgoing students are replaced by incoming students each year.

A second school, Bronx Intermediate, established a horizontal system whereby support staff were assigned to a single grade level and remain with this age group through graduation before beginning again with incoming freshmen. Since large numbers of students drop out currently, staff members work with an ever diminishing number of students before starting over with freshmen in the fifth year.

A third strategy employed at Brooklyn Large involved assigning to each house a group of teacher case managers who taught most of their courses in house as well. These teachers made contact with students (and their parents) belonging to their 24-student caseload on a regular basis. Their task was to monitor students' attendance, punctuality, class performance, homework completion, grades, nutrition, and career interests. Teachers shared responsibility for meeting student support needs with support staff who, in a similar manner, were also assigned to each house and had other schoolwide duties as well.

House support teams. The first two models involving reorganization of support staff around houses represent enormous improvements in the efficacy and efficiency of providing students with support and guidance.⁵ Under these student-centered systems, students get to know and rely on a stable corps of helpers, and support staff of all categories (deans, guidance counselors, grade advisors, paraprofessionals) enjoy an expanded opportunity to work as a team, able to pool their skills and knowledge of students and to intervene with consistency (both across staff and years).

Traditionally, student support is organized around staff functions, managing discipline, grade advisement, etc. Students encounter different staff for different problems and from year to year since many support staff are assigned to different grade levels. Given the very large ratios of students to support staff that exist in neighborhood high schools (e.g., 600 students: 1 guidance counselor), the current reorganization makes support staff hours go much further.

There is probably room for yet more improvement in support provision. Under the reorganized support systems, some support staff still maintained schoolwide duties, a concomitant of incompletely realized house plans. As long as the academic program is organized outside houses, schools will continue to need to operate a dual system of support at the expense of effectiveness.

Further, reorganized support staff continued to function quite independently of teachers. Even where students' instruction was organized in-house, teachers reported no significant increase in communicating with house support staff. (See Following Section.) Since students' emotional, social, and intellectual needs are very often interrelated, students stand to benefit from greater coordination of instruction and support functions. One way of achieving this would be to assign support staff to teacher teams.

⁵ Phillips, S. (1987). Increased support services: Not how much? But how? The Journal, XXXI, 107-111.

Teacher case managers. Using teachers to carry out student support functions was extremely unpopular among teachers at Brooklyn Large even though it reduced their caseload by one. Teachers generally held the work of teachers to be instruction, not student monitoring. Case managers participated in training sessions, but continued to express uncertainty about what they were supposed to do. Indeed, teachers are asked to perform tasks for which guidance staff receive extensive training and augmented salaries. Ironically, guidance counselors do not often perform these duties themselves since their huge caseloads restrict them to such chores as course advisement and resolving schedule conflicts.

School administrators are responding to educational critiques which cite the need for teachers to build stronger relationships with students and their parents in order to increase student engagement in school.⁶ Yet, weak teacher-student relationships are clearly a product of school size and organization. In this sense house systems seek to address the source of the problem; they simulate small schools in which teachers tend to get more involved with students because they are able to get to know the students they teach. On the other hand, case management is a rather bureaucratic answer to a problem with bureaucratic roots. It requires teachers to adopt a specialized role (manager) in relation to a circumscribed group of students (cases) during a specified period of the day in order to monitor students, albeit in a highly systematic manner.

An Alternative Model. Other methods may be used to achieve strengthened student monitoring which make better use of teachers' skills. At Bronx Intermediate, for example, staff sought to make teacher-student relationships more productive by giving teacher teams more instructional time with a smaller number of students and assigning a full complement of support staff to each house.

In fact, to the extent that teacher teams work effectively, that is, are well acquainted with and highly supportive of students, many of the support roles that have been assumed by teachers (grade advisor, program planner, dean) may become unnecessary. In such an eventuality, some support staff could return to the classroom and in effect be used to fund a reduction in class size. Guidance counselors, as specially trained staff, would remain, possibly

⁶ Carnegie Foundation for the Advancement of Teaching. (1988). An imperiled generation: Saving urban schools. Princeton, New Jersey: Carnegie Foundation for the Advancement of Teaching.

directing less expensive paraprofessional teams to carry out still needed student monitoring tasks (as has already proven useful under the citywide dropout prevention program).⁷

Student Activities

Staff members organized extracurricular and co-curricular activities at the house level in all four schools. They viewed these activities as an integral part of the house plan concept aimed at increasing student engagement. The most frequently offered class of activities was one concerned with recognizing student accomplishments, e.g., awards assemblies, reward trips for students with good grades and attendance, etc. Another group of activities centered around increasing students' identity with the house by producing house newsletters, giving out house T-shirts, etc. Field trips to museums and theaters, guest speakers, and student performances also were planned as co-curricular events to enliven classroom learning.

There is little question that such activities help create a student-oriented culture which conveys important school values as well as attention to more individuals than is ordinarily possible on a schoolwide basis. As a co-curricular program, many of the field trips constituted an opportunity to open students' eyes to aspects of our culture to which they had never before been exposed. A field trip of this kind can be the source of a whole new interest for students who seldom venture out of their neighborhoods.

Our analysis of extra- and co-curricular offerings also revealed that few of these activities allowed students prolonged periods of time to pursue or develop a given interest or talent. Most were single events in which students played passive roles. The student newsletters and performances were important exceptions. More time could be found in the academic program either in core subjects or electives or both for students to work on related projects of their own choosing and at their own pace.⁸ After school programs could also be organized to allow students to pursue interests unrelated to classwork. Student activities, including sports, that are organized on a schoolwide basis often do not attract large numbers of students; new sports fields are underutilized. Intramural athletics organized as inter-house competitions might enjoy greater student participation.

⁷ Oxley, D. (1988). Effective dropout prevention: The case for schoolwide reform. New York: Public Education Association.

⁸ See the discussion of "free learning" in an article about a German Comprehensive School entitled: Creating a school community. (1988). American Educator, 12, 1, 10-17, 38-43.

Developing a full program of house activities will require more effort and funding, but still will be easier than creating an engaging academic program. However, an elaborate set of extracurriculars, even organized on a house basis, will not compensate for an ineffective approach to academic work. Staff in neighborhood schools not included in our study reported having developed very successful extracurriculars for students without having any effect on their school performance. In combination with a sound academic program, however, house extracurriculars can multiply students' opportunities to participate actively in developing important skills along with self-esteem that contribute to a well rounded education.

Physical Facilities

Building space was rearranged to create house offices for staff in three of the four schools studied. In the two schools which fully reorganized support staff around houses, large offices housed all the house staff together. In the third, departmental offices were used to house the departmental supervisor, his/her assistant (the house coordinator), a secretary and, perhaps, paraprofessional. At Bronx Intermediate and Brooklyn Large, where staff had also organized an academic program around the house, students' classrooms were sited adjacent to one another. Only at Brooklyn Large, however, were house classrooms located next to the house office. Staff posted house news and student achievements in these areas and generally tried to decorate the space to reinforce house identity.

Brooklyn Large represents the most successful attempt to establish houses as a physically cohesive and separate area of the building. The ninth grade Humanities house occupied an entire corridor containing the house office, flanked on either side by classrooms where students took nearly all their courses. Different wings of the building were designated for all the sub-schools; each contained the department office and a few adjoining classrooms. However, while students might have one or two classes in these wings, they continued to take courses throughout the building.

Separate areas of the school building are also frequently set aside for programs such as dropout prevention, but where programs or houses are organized for students with academic problems, physical separation has a downside. Social cohesiveness is won at the expense of students' gaining pariah-like images and being isolated from their mainstream peers.

Creating house areas proved vital to the day to day operation of houses. House offices facilitated communication among staff and provided students with a more personal and stable place to go for help and information. House instructional areas allowed students to stay in one area of the building for most of the day; they spent time between classes interacting with house

students and teachers in place of rushing to another area of the building to reach a class in time. Students returned to their house area during other free times and even during the following year at Brooklyn Large, where as 10th graders they had less intimate physical accommodations.

The creation of house instructional areas has particular significance since hallway disorder and arriving late to class are preoccupations in these schools, especially the largest schools where large numbers of students walk long distances between classes. Further, these areas give students a home base, an area to identify as their own, in schools which provide no other physical marker, not even a locker, to reflect student identity.

Schools received no additional funding with which to make architectural modifications as they have elsewhere (e.g., Rochester, NY). This fact helps explain the rather modest physical arrangements staff made for houses and casts considerable doubt on whether they will be able to physically accommodate houses to any greater extent in the future. Much of the existing space, such as science, computer and special education classrooms, serves specialized functions and cannot be allocated for other purposes without renovation.

House Management

Two contrasting forms of house management were observed across the four schools. The house systems by which staff and students were organized more completely into a wide assortment of new and existing programs of varying size employed an administrative assistant principal as the overall supervisor and teachers as coordinators of individual houses. The house systems involving a few relatively large and equivalent sub-schools employed assistant principals in charge of departments as supervisors of each sub-school and teachers as sub-school coordinators; the principal occupied the only overall position of responsibility.

The two management structures follow directly from the two general house system forms. The many small program houses found under one type of system relied on existing program heads, teachers, for house coordination even though they lack authority over the other program teachers and support staff who had been assigned to each house. The assistant principal in charge of the entire house plan was required only to supervise the implementation of the plan.

On the other hand, the large, general houses/sub-schools which defined the second category of house systems more clearly called for supervisors who command enough authority to see that broad curricular as well as student support needs are met. At Brooklyn Large, the original plan was to promote assistant principals to principals in charge of each sub-school and

the principal to executive principal. The plan was scuttled by teachers' union action prompted by teachers' concern that having two layers of principals would remove teachers even further from decision-making. Consequently, assistant principals kept their positions in addition to assuming responsibility for the sub-schools. APs at Bronx Intermediate did the same.

"House" departmental assistant principals, however, were unable to compete with the authority of other department APs in overseeing their house instructional staffs, which were composed of teachers from all major academic areas. When house needs conflicted with those of departments, teachers followed departmental policy to the detriment of house goals. The experience of house APs speaks loudly for supervisors with greater authority.

"House masters". House supervisors need not be principals, however. An argument can be made that what is needed is a career ladder for teachers which does not require them to leave teaching, but instead allows them to exercise leadership while remaining intimately connected to the task of instruction itself.⁹ By this means, a teacher "house master" with broad pedagogical skill and experience would supervise house teachers and support staff and teach a reduced class load. House masters would maintain a valuable instructional perspective which should be central to all house and school functions.

The proposed dual supervisory/instructional role of house leaders should not obscure the fact that they need to function with as much authority as do principals in order to be maximally responsive to house students and staff. They need to exercise ultimate responsibility for hiring and directing all staff, support as well as instructional, creating the master class schedule, and handling all student affairs. In order to do this, house leaders need an operating budget. Without such power, it is unlikely that houses could operate as small schools do, that is, with a more flexible class schedule, greater proximity of staff and students to decisionmakers, and a more strongly shared sense of purpose.

School supervision. House leaders would not supplant the school principal, who is needed to oversee schoolwide functions. He/she must supervise school maintenance and security, set and monitor school goals, respond to the community, resolve student and staff issues which transcend house boundaries, insure equal standards and equitable distribution of resources across houses, and develop and maintain any curricular (e.g., night school) or extracurricular programs (e.g., athletic teams) that are deemed necessary beyond house offerings.

⁹ Boyer, E. (1983). High school: A report on secondary education in America. New York: Harper & Row.

Staff empowerment. Perhaps, the greatest potential of the decentralized form of school management proposed here is for increasing staff input into decision-making. If house leaders are truly empowered to determine policy at the house level, then they can usefully join with house staff in setting policy. If house leaders have little autonomy, then staff input is meaningless.

Involving staff is a much easier undertaking in the smaller environment of a house or sub-school. A small staff knows and interacts with one another to a greater extent, facilitating the informal communication of ideas and events; the house leader is physically proximate. It is easier to involve all staff in planning or, alternatively, to have representatives convey information adequately.

As many schoolwide issues as possible should be engaged at the house level to maximize staff input and, correspondingly, the number of ideas and strategies that are brought to bear on these problems. For example, the state-imposed school improvement planning process should be established within each house along with a mechanism for sharing ideas across houses.

Student empowerment. Similarly, the house system creates an opportunity for students to have more meaningful input into policy setting. House student councils can be established over and above or in place of the schoolwide council, thus multiplying the number of opportunities students have to participate in student government. Councils can work intimately and are more likely to have an impact with a staff they know and see each day.

House System Costs

The three schools which developed substantive house plans received large amounts of supplemental funding to implement them and other reforms that were part of broad scale school improvement efforts. The task of costing out house systems required us to distinguish between costs dictated by the house system itself and those flowing from other reform concepts. For example, house systems by definition do not require smaller classes or teacher case managers, both features of Brooklyn Large's overall improvement plan. On the other hand, the creation of house coordinators at Brooklyn Large was directly linked to organizing the school into houses.

We obtained budgetary information from school administrators. Budget figures reflected expenditures for house staff needed beyond those already supported by the school's normal operating budget. We analyzed staff costs only, which represent by far the largest part of the budget. We did not obtain figures for other than personnel costs, such as the costs of materials or transportation used to carry out house extracurriculars. We must also note that

these costs are associated with house systems in their first and second year of implementation and are subject to change as the house systems continue to evolve.

At Brooklyn Large, less than half of the supplemental funds received from the Board of Education (BOE) for school improvement were spent on house-related staff positions for a total of just over \$386,000. This amount covered the cost of reducing house supervisors' and coordinators' courseloads to enable them to assume house administrative duties and of deploying extra guidance counselors, secretaries and paraprofessionals in the houses. The balance of the funds were used to reduce class size and free teachers from a class to conduct case management.

It is not at all clear, however, that the not insignificant sum of \$386,000 represents necessary costs of the house system. For example, funds were used to support new house positions instead of more completely organizing existing staff around the houses. House staff coexist with large numbers of staff, including guidance counselors, deans, program planners, and grade advisors, who retained schoolwide student support responsibilities. Unfortunately, unless the academic program is organized within houses, it will be necessary to maintain both schoolwide and house staff. In effect, Brooklyn Large now supports two organizational frameworks, the house system along with the traditional structure, at an augmented expense.

Bronx Intermediate provides a more frugal example of spending in support of the house system. First of all, staff such as deans and guidance counselors were organized around houses; grade advisors were made house coordinators. Federal Chapter I monies were then redirected from a pull-out program to the newly reorganized academic program under a new clause permitting funds to be spent on schoolwide reforms in schools where 75% of students live in poverty. Specifically, the Chapter I funds were used to enhance guidance and reduce class size. Thus, no new BOE outlays were made for Bronx Intermediate's house system, although the principal felt they were needed to support their house extracurricular programs.

The analysis of house system costs serves to point out that house systems can be quite expensive when they overlay instead of replace the existing organization structure. That is not to say that house systems can be established at no cost. In general, the Division of High School provided only planning grants to assist schools in enacting a house system. The costs of developing extracurricular programs at the house level and making architectural modifications to create physically separate house areas have not been explored here, but most likely represent both necessary and significant expenditures. Moreover, the reorganization of instruction on a schoolwide basis along the lines described earlier implies a need for staff development and corresponding resources.

Summary and Conclusions

Key organizational features of house systems. We have enumerated a set of key design features of house systems in Table 1. On the basis of the in-depth analysis of the four NYC high school house systems, a study of several others outside NYC, and a review of the literature, we view each feature as necessary to the development of a successful house system.

The features taken as a whole go beyond defining a small school, which is about as far as the literature can take one. They define:

- a small school environment in which staff and students spend the majority of their time interacting with each other in small and stable groups and where rich opportunities for students to participate in extracurricular activities exist;
- an educational format which is structured to provide students with more coordinated and cohesive instruction that is predicated on teachers' working as mutually supportive members of a cross-disciplinary team;
- a system of local management which depends on a high level of participation in decision-making by both staff and students and narrows the gap between administrative and instructional functions.

The house system so defined addresses many of the major criticisms made of traditional high school organization.¹⁰ In particular, it speaks to the characterization of schools as large, bureaucratic institutions which are impersonal, alienating, and unresponsive to students as well as staff; to the curriculum which is viewed as fragmented and broad rather than deep; and to school management that relies on top-down decision-making and is widely found to be divisive and ineffective.

Barriers to implementation. Our study points out starkly the difficulties inherent in establishing house systems within a traditional school setting. The student-centered house system cannot coexist with traditional, subject-centered schooling. Features of the latter which pose serious barriers to a house system include a curriculum that is broken up into multiple

¹⁰ National Coalition of Advocates for Students. (1985). Barriers to excellence: Our children at risk. Washington, D.C; Committee for Economic Development. (1987). Children in need: Investment strategies for the educationally disadvantaged. New York;Sizer, T. (1984). Horace's compromise. Boston: Houghton-Mifflin.

Table 1
Key Features of the House System

Instruction

House Unit Structure:

1. Students and interdisciplinary staff are organized into houses (of not more than 500 students) for instruction;
2. Houses are not based on differing abilities;
3. Students remain in the same house across grade levels.

Sub-Unit Structure:

4. The house is subdivided into instructional units containing an interdisciplinary team of teachers who share a group of students in common for instruction;
5. Teacher teams develop a coordinated curriculum;
6. The day/week is structured to give teams time to meet as a group.

Student Support

7. Support staff are permanently linked to each house.

Extracurricular Activities

8. Extracurricular activities are organized within each house.

Physical Facilities

9. Physical facilities allow students to take most courses and meet with staff in physical proximity.

House Management

10. Houses are managed by their own staffs and have an operating budget.
-

academic tracks and programs, an academic department structure which, alone, drives curriculum development and staff supervision, and a specialized system of student support that directs different staff to focus on different aspects of student functioning.

By way of summarizing the obstacles that staff encountered in trying to implement a house system, the most significant barriers, along with tried and untried strategies for surmounting these barriers and the implications that different strategies have for long-term planning, are listed in Table 2. An attempt was made to present only the most constructive options for dealing with barriers. In many cases, one option represents a more radical restructuring of the existing system, while the other represents something of a compromise strategy.

Table 2

Barriers to the Implementation of the House System, Possible Solutions, and their Implications for Planning

Barriers to Implementation	Possible Solutions	Implications for Planning
Large numbers of specialized courses due to multiple tracks, funded programs and remedial and elective courses create insufficient numbers of students for courses within house.	<ul style="list-style-type: none"> a) Create mixed ability classes and general curriculum b) Assign funded programs to larger houses 	<ul style="list-style-type: none"> a) Heavy investment in staff development needed b) Scheduling is complicated by need to run separate and mixed classes
Teacher specialization in instruction at particular grade levels creates need to fill course load by teaching outside house.	<ul style="list-style-type: none"> a) Have teachers instruct across all grade levels b) Do not assign teachers exclusively to a house 	<ul style="list-style-type: none"> a) Teachers of higher level courses are needed to provide staff development for teachers who instruct lower level courses b) Strength of house concept is largely lost
Rigid curriculum and testing requirements impede development of interdisciplinary curriculum.	<ul style="list-style-type: none"> a) Obtain permission for temporary suspension of requirements b) Create additional instructional time to accommodate new curriculum 	<ul style="list-style-type: none"> a) Alternative academic goals must be set, monitored b) New instruction creates additional material to learn rather than synthesizes existing curriculum
Academic department assistant principals' authority leaves house supervisor impotent to organize house staff into interdisciplinary unit.	<ul style="list-style-type: none"> a) Give house supervisor pedagogical authority equal to academic supervisors' curricular authority b) Give house supervisor authority equivalent to principal and principal authority over houses 	<ul style="list-style-type: none"> a) Pedagogical AP positions may be created or departmental AP position must be eliminated b) New teacher career ladder must be created
Support staff are not easily integrated into houses because their specialized functions are predicated on large schools and separation from instruction.	<ul style="list-style-type: none"> a) Create house support teams composed of generalists and headed by guidance counselors b) Maintain specialized functions at house level but also assign support staff to teacher teams 	<ul style="list-style-type: none"> a) Guidance counselors must have more authority or professional team may be replaced by paraprofessionals b) Assignment is complicated by support staff's different training and teaching loads
Organization of extracurriculars at house level creates need for additional funds.	<ul style="list-style-type: none"> a) Target savings from reduced security needs for extracurriculars b) Reduce scope of schoolwide extracurricular program 	<ul style="list-style-type: none"> a) Savings on security depend on implementing all features of the house system well b) Staff must create consensus about what programs should be cut
Rigidity of building may not permit houses to be established in physically separate areas.	<ul style="list-style-type: none"> a) Pursue funds for architectural modifications b) Establish at minimum classroom clusters for teacher teams 	<ul style="list-style-type: none"> a) Trade-offs may be required b) Mechanism for strengthening house unity is needed

II

STATISTICAL COMPARISONS OF DIFFERENT HOUSE SYSTEMS

In order to document the hypothesized benefits of house systems, we collected extensive data from students and staff in the four schools whose house systems were described previously. Student and staff questionnaires and school records of student performance were the sources of data. Since none of the schools implemented a powerful and complete house system in terms of the features listed in Table 1, we are unable to demonstrate the full potential of house systems in any absolute sense. Instead, we designed the statistical analysis to evaluate the relative advantage of more complete designs over others.

Although house systems have a decades-long history in U.S. schools, their benefits are not well documented. Research has not examined house system effects within a conceptual or theoretical framework that would allow researchers to account for their findings in a reliable manner. The present research uses theories of school and organization size¹¹ to specify more comprehensively what the effects of house systems are and the mechanisms by which house systems produce these effects.

According to theory, house systems affect students directly in two general ways: Through creating more supportive relationships among students, teachers, and support staff and more opportunities for students to participate in school life, that is, extracurricular and co-curricular activities. Supportive relationships and extracurricular participation are variables which are considered instrumental to achieving desired student outcomes, such as regular attendance and good academic performance. House systems affect staff directly by enhancing their interaction and involvement in decision-making which, in turn, leads to increased satisfaction with their jobs.

The direct and indirect effects of house systems on students and staff are listed in Table 3. Statistical analyses were conducted to test the overarching hypothesis that well designed house systems affect students and staff in a manner consistent with theory. These analyses do not rule out alternative explanations for the observed effects, but make them less tenable.

¹¹ Barker, R. & Associates. (1978). Habitats, environments and human behavior. San Francisco: Jossey-Bass; Kimberly, J. (1976). Organizational size and the structuralist perspective: A review, critique, and proposal. Administrative Science Quarterly, 21, 571-597.

Table 3

Direct and Indirect Effects of the House System

Direct Effects on Students and Teachers	Indirect Effects on Students and Teachers
Greater teacher-student interaction and familiarity	Improved student discipline
Greater support staff-student interaction and familiarity	Heightened student self-esteem
Enhanced participation in extracurricular activities	Improved student attendance
Increased staff involvement in decision-making	Improved academic performance
Increased staff collegiality	More favorable school climate
	Higher staff job satisfaction/morale

Method

Sample

Schools. The study schools were selected from a larger group of NYC high schools serving similar student populations. Black and Hispanic students predominate in these schools; white students are nearly nonexistent. Sizable proportions of the students are poor and have only limited proficiency in English. The staffs of these schools are also quite comparable; they tend to have extensive training and experience and are mostly white.

The schools in our study sample were allowed to vary on two potentially important dimensions: student ethnicity and school size. Black students represented a proportion of the student body ranging from a minority of 14% to a majority of 90%. School size was over 3,000 in two schools, approximately 1,700 students in one school, and close to 1,000 students in another. We were particularly interested in comparing the impact of house systems on staff and students in schools of different sizes. We wanted to know whether the benefits accruing to large schools with house systems approached those of a relatively small school which, on the basis of size alone, should afford certain advantages, e.g., greater student-staff familiarity.

Students and staff. Students were sampled from each house in the school, except bilingual and special education. The latter were not investigated in the present study since these programs remained essentially unchanged by the house system regardless of whether they had been officially designated as houses. However, students targeted for dropout prevention services were sampled. The schools' house plans accommodated at-risk students in different ways and afforded the opportunity to evaluate how well at-risk students fare under different arrangements. Only 9th and 10th graders were included in the sample since the upper grades had not been organized into houses at the time of our study. In all, 311 students completed questionnaires; the number ranged from 57 in the smallest school to 101 in the largest.

A total of 83 staff completed questionnaires; the number ranged from 14 in the smallest school to 36 in the largest. The sample was restricted to staff who instructed mostly 9th and 10th graders.

Measures

The measures described below were either specially constructed for the present study or are established instruments. In all cases, the psychometric properties of the measures were assessed in this study and found to be adequate; means, standard deviations, and reliability coefficients are presented in Appendix A.

Student questionnaire. A student questionnaire was constructed to measure student effects. Students were asked about their peer relationships and their ties to teachers and support staff. In each case, a multiple-item scale was used to assess students' strength of relationship with these individuals along two dimensions: degree of acquaintanceship and range of interaction. For example, students were asked, "how many of your teachers (students in your house) do you know quite well?" and "how many have you participated in house extracurriculars with?" In order to measure reliably students' relationships with support staff with whom they have less frequent interaction, we listed the names of support staff assigned to the student and asked students to indicate whether they knew or had interacted with each.

To measure extracurricular participation we inventoried the activities that had been organized in each house for students, listed each type of activity on the questionnaire, and asked students to indicate how many times they had participated in each.

We administered a global self-worth sub-scale taken from the Self-Perception Profile for Adolescents¹² and two sets of items measuring student deportment and school climate adapted from the High School and Beyond Survey.¹³ The school climate scale requires students to rate the quality of several aspects of their school, e.g., safety, teaching, that are intended to assess the overall academic and social environment of the school. We also asked students to state in an open-ended way what they liked best about their house. A category system was developed, and students' answers were coded accordingly; inter-coder reliability was high (90%).

Finally, we obtained attendance and academic performance indices for spring semester from students' official transcripts. We did not examine students' fall performance since incoming freshmen often are not settled into classes until late fall.

Staff questionnaire. We developed items which tapped how well teachers know their students. Teachers were asked how many students came to them with personal problems, how many they knew academically across the several courses they took, and how many they knew in personal terms related to home and neighborhood. In addition, we administered two scales taken from the School Assessment Survey.¹⁴ One consisted of two sub-scales measuring the extent of teacher influence over curriculum and instruction and resource allocation. The

¹² Harter, S. (1986). Self-perception profile for adolescents. Denver, CO: University of Denver.

¹³ National Opinion Research Center. (1980). High school and beyond. Chicago, IL: University of Chicago: Chicago, IL.

¹⁴ Wilson, B. (1985). School Assessment Survey. Educational Leadership, 42, 6, 50-53.

second scale assessed the frequency with which teachers communicated with key colleagues about different aspects of their work. Finally, teachers were asked to respond to a teacher morale scale taken from the Effective School Battery.¹⁵

Questionnaire administration. Researchers administered questionnaires to students in their classrooms during a regularly scheduled class period. Students and their parents were asked beforehand to give their consent to participate voluntarily in the study; consent forms were printed in both English and Spanish. The researchers provided a brief introduction to the study and questionnaire and offered to provide assistance in English or Spanish. Staff filled out questionnaires during their free periods and returned them to a designated teacher.

Design of Analysis

As described earlier, there was enormous variation in the design of individual houses within each school, and, almost always, house structure changed from ninth grade, where houses were viewed as most needed, to tenth grade. In order to be able to draw clear inferences about the effects of different house designs in schools of different size, we grouped houses into homogeneous categories and made comparisons within single grade levels.

House types. To assess student effects, four different house types were created. Students in the two largest schools, Manhattan and Brooklyn, with the exception of students in Brooklyn's 9th Grade Humanities Sub-School, were placed in the loosely structured house/large school category; the number of students from each school was equal. Support staff and a minimal number of teachers were organized around these students' houses. Students in the smallest school, Bronx Small, were assigned to the loosely structured house/small school category. Only one teacher and a house theme course were organized around houses at Bronx Small. Students in the 9th Grade Humanities Sub-School were assigned to the tightly structured house/large school category. Students in the 9th Grade house plan at Bronx Intermediate were categorized as tightly structured/intermediate size. Both support staff and all core academic teachers were organized within the house in the tightly structured house categories.

Student ethnicity was distributed across house types in the following way: A mix of blacks and Hispanics comprised the loosely structured/large school category, since Manhattan and Brooklyn have mostly Hispanic and mostly black students respectively. The loosely structured/small school house type contained mostly Hispanics, and the tightly structured/large

¹⁵ Gottfredson, G. (1985). Effective school battery: User's manual. Odessa, FL: Psychological Assessment Resources.

school type contained mostly blacks. The tightly structured/intermediate size school category was composed of Hispanics and blacks in the ratio of 2:1.

In order to examine teacher effects, we constructed a fifth house category called no house/large school. This allowed us to compare teachers at Manhattan and Brooklyn who were not assigned to a house with those who were assigned to loosely structured houses as well as to tightly structured ones.

Analysis of variance (ANOVA) and Scheffe's test for inter-group differences were used to test hypotheses.

Results

Students

Table 4 displays the mean variable scores obtained for 9th grade students in each house type; students targeted for dropout prevention services were excluded from these analyses since they were unequally represented across different house types.

Relationships with peers. Students' familiarity with other students in their house varied significantly across house types ($p < .05$). Students were least familiar with one another in the loosely structured houses of the large schools. They reported a roughly equal degree of familiarity with each other in the tightly structured houses and in the smallest school. Overall, students' scores fell near the midpoint of the range.

Relationships with teachers. The percentage of teachers with whom students indicated they had strong ties also varied to a significant extent across house types. Students in the loosely structured houses of the large schools, again, had the weakest ties, but differed only slightly from students in the tightly structured house in the small school; both groups knew about a quarter of their teachers. Students in the tightly structured house in the large school and students in the smallest school had the strongest ties with teachers; they reported knowing about a third of their teachers.

Relationships with support staff. Up to five support staff were assigned to houses; these included a house coordinator, supervising assistant principal, grade advisor or dean, and paraprofessional. Only students in the tightly structured houses at the intermediate size school had all five support staff to draw upon exclusively. Students in the other houses had four support staff, but these were not always exclusively assigned to the student's house. An inspection of the mean support staff scores, however, reveals that despite official staff assignments, students across all house types interacted chiefly with just two support staff, the house coordinator and guidance counselor or, in the case of one house, grade advisor.

Table 4

A Comparison of the Effects of
Different House Types on Students

Measures*	Mean Score by House Type				Significance Levels
	Loosely Structured/ Large School	Loosely Structured/ Small School	Tightly Structured/ Large School	Tightly Structured/ Intermediate Size School	
Know students (1-5)	2.88	3.17	3.25	3.19	.02
% teachers known	.24	.33	.31	.26	.02
Know house coordinator (1-2)	1.39	1.53	1.47	1.54	.01
Know assistant principal (1-2)	1.19	1.17	1.10	1.12	.07
Know grade advisor/dean (1-2)			1.47	1.17	
Know guidance counselor (1-2)	1.43	1.51	1.19	1.59	.00
Know paraprofessional (1-2)	1.16	1.12		1.15	
# of extracurriculars	2.57	5.89	5.14	9.83	.00
Self-esteem (1-4)	2.74	2.92	3.18	2.91	.09
Sense of community (0-1)	.14	.13	.41	.36	.01
Have cut classes (1-2)	1.57	1.24	1.30	1.52	.00
# of days absent	11.11	12.44	11.52	10.71	.95
Average grade (0-100)	63.06	66.88	67.31	67.50	.28
# of credits	3.43	4.78	4.17	3.96	.05
Was promoted (1-2)	1.43	1.59	1.62	1.78	.03

* Numbers in parentheses indicate score range

Students' ratings of their house coordinator differed across house type to a significant extent. Scores were lowest among students in the loosely structured houses in the large schools, highest among students in the tightly structured houses at the intermediate size school and in the loosely structured house/small school, and intermediate for students in the tightly structured house/large school. Overall, scores fell in the middle of range.

Students' ratings of their guidance counselor also differed to a significant extent across house designs. Students in the tightly structured house/intermediate size school rated their counselor highest; students in the loosely structured house/small school gave the next highest rating; and students in the loosely structured house/large school gave the third highest rating. Students in the tightly structured house/large school rated their counselor very low, probably because the counselor was not exclusively assigned to the house. In contrast, they gave their grade advisor, who was exclusively assigned to the house, a rating closer to that received by the other students' counselors.

Students' ratings of the assistant principal in charge of the house were uniformly low and did not vary to a significant extent across house types. Student ratings of paraprofessionals were similarly low. The only dean rated received a score similar to that obtained for assistant principals and paraprofessionals. Statistical comparisons were not conducted where a particular type of support staff was not found across all house types. In any case, with the exception of the grade advisor in the tightly structured house in the large school, these additional support staff appeared to provide negligible amounts of support.

Extracurricular activities. The number of extracurricular events in which students participated ranged widely from a high of 9.83 in the tightly structured house/intermediate size school to a low of 2.57 activities in the loosely structured houses in the large schools, a statistically significant difference. Students in the tightly structured house/large school participated in 5.14 activities, about as many as students in the loosely structured house/small school, 5.89.

Best-liked house feature. Students' free-format responses to the question, "what do you like best about your house," fell most often into two categories labeled sense of community and house curriculum. Sense of community indexed students' positive feelings about collective members of the house, peers or staff, or sense of unique identity as a member of the house. House curriculum referred to students' liking for their houses's curricular emphasis or unique course offerings. These categories strongly differentiated house types. Students in the tightly structured houses more often expressed a sense of community than members of loosely structured houses; the latter more often expressed a liking for their house curriculum. Only

the results for sense of community are included in Table 4 since it is the only effect of the two that can be predicted on the basis of theory.

School climate. Generally speaking, students perceived the climate of their school to be average, although their ratings varied from slightly below to slightly above average across house types, yielding a statistically significant difference. Students rated school climate highest at the loosely structured/small school, intermediate at the tightly structured/intermediate size school, and lowest at the loosely structured/large schools. School size seems to differentiate school climate ratings better than house type. The findings are not presented in Table 4 because one cannot reasonably predict a school climate effect of houses which are not organized on a schoolwide basis.

Self-esteem. Student self-esteem varied only to a marginally significant extent ($p < .10$) across house types. Self-esteem was highest among students in the tightly structured house/large school, intermediate in the tightly structured/intermediate size school and loosely structured/small school and lowest in the loosely structured/large school. Student ratings reflected positive self-esteem generally.

Attendance. The number of days students were absent during spring semester was very nearly the same across house types. Students' self-report of whether they cut classes from time to time, however, revealed significant differences: Students in the loosely structured/large school and tightly structured/intermediate size school cut classes with roughly the same frequency and more often than students in the loosely structured/small school and tightly structured/large school who also did not differ appreciably from one another on this variable.

Academic performance. House type differentiated students' academic performance on two of three indices recorded by schools. Students in the loosely structured/large schools earned the fewest course credits; students in the tightly structured houses earned an intermediate number; and students in the loosely structured small school earned the most. Similarly, students in the loosely structured/large schools were promoted less often than students in any of the other schools. Students in the tightly structured/intermediate size school appear to have the highest promotion rate, but the finding is misleading given that staff had eased promotion standards during the study year. These students' relative rate of promotion probably corresponds more closely to the relative number of credits they earned. Students' average grade across the courses they took did not differ significantly across house types, but showed the same pattern of variation as the other two indices.

In order to strengthen the argument that these findings are due to house type and not preexisting differences in student ability, we examined the only readily available index of students' academic proficiency in 8th grade, their standardized scores on a reading test

(Degrees of Reading Power). Analysis showed that students' 8th grade reading scores were not significantly different across house types.

Discussion of student effects. Statistical analyses of the effect of different house systems on student outcome variables provided support for the claim that house systems which organize all facets of schooling around houses, instruction as well as support and student activities, have a more favorable impact on students than ones which do not.

In eight of the nine analyses which yielded a significant effect of house type, students in at least one of the categories of loosely structured houses, usually the loosely structured/large school, had the poorest outcomes. In six of those analyses, students in at least one of the tightly structured house types had the most positive outcomes. Importantly, the same trends were observed across both direct and indirect effect variables.

A comparison of tightly versus loosely structured house types in schools of the same size provides the clearest indication of the superiority of the tightly structured houses. Higher mean scores were obtained for students in the tightly structured house in the large school than in the loosely structured houses in the large schools on nearly every variable for which a significant effect was found. These findings help to rule out the possibility that school size as opposed to house type produced the observed differences.

While the consistency of the effects of house type on students may be impressive, the magnitude of these effects is not. Only rarely was the effect for house type large enough to yield statistically significant differences between any two pairs of house types, making it impossible to claim, for example, that the mean score differences between tightly and loosely structured houses in the large schools are not chance findings. Only the consistent pattern of differences across so many variables suggests they are not.

Furthermore, most of the variation in effect scores is attributable to differences between the tightly structured houses and the loosely structured houses in the large schools, but not the small school. Indeed, the small school effects are quite similar to those found for tightly structured houses. This suggests that the stronger house systems established in the larger schools provided more student support than the large schools with weak house systems, but still are not strong enough to outperform the small school with a weak house system.

Students' ratings of their relationships with others in their house showed that at best students interacted closely with "several" of their peers and one-third of their teachers (fewer than two) and shared a moderate degree of acquaintanceship with two support staff. These findings may indicate there is room for improvement. The staff outcomes presented below give another indication of how house systems could be strengthened.

Teachers

Variable mean scores for teachers in each house type are presented in Table 5. By way of validating their house type assignment, we examined the number of classes they reported they instructed within a house. Their responses are clearly differentiated by house type. Teachers in the tightly structured houses taught their full classload within their house, 4-5 classes; teachers in the loosely structured houses in the large schools taught only two; teachers in the loosely structured houses in the small school and unassigned teachers taught less than one.

Relationships with students. We asked teachers how many students they taught in the current semester and, then, how many of these they had certain knowledge of or experience with. Despite the fact that class size had been reduced for teachers in the tightly structured houses, the total number of students they taught (89 in the large school and 102 in the intermediate size school) was not significantly different from that for other teachers ($p=.65$) owing to smaller classloads and normal variations in class size.

Teachers indicated generally small numbers of students had asked them for personal advice in the past two weeks; the number did not vary to a significant extent across house types. Teachers knew larger numbers of students on a personal basis, but these numbers also were not discriminable by house type. However, the extent to which teachers were acquainted with students' academic performance across the several courses they took differed in the manner predicted. Teachers in the tightly structured houses knew the largest numbers of students academically; teachers in the loosely structured houses in the large schools knew an intermediate number; and teachers in the other two categories knew the smallest numbers.

Collegiality. Teachers spoke about their work most often with another teacher, close to once or twice a week on average; they communicated with their supervisor about their work closer to once or twice a month and with a counselor slightly less often than that. Scores on these measures did not vary across house type.

We also examined whether the key colleagues with whom respondents interacted were in the same house as the respondent. Respondents usually communicated with teachers, administrators, and counselors in the same house where all three types of staff were organized around houses: in the loosely structured house/large school and the tightly structured houses. This was especially true of respondents' communication with teacher peers and counselors, but less so with administrators. Mean scores across the three house types ranged from .61 to .80 for teachers and counselors and from .30 to .56 for administrators on a 0-1 scale; scores did not vary significantly among the three house types, but differed to a significant extent from the scores

Table 5

**A Comparison of the Effects of
Different House Types on Teachers**

Measures*	Mean Score by House Type					Significance Levels
	Loosely Structured/ Large School	Loosely Structured/ Small School	Tightly Structured/ Large School	Tightly Structured/ Intermediate Size School	No House/ Large School	
# of house classes taught	2.00	.80	3.88	4.78	.83	.00
# of students seeking advice	5.15	7.67	11.44	4.80	6.65	.27
# of students known academically	27.44	12.86	41.67	39.00	15.06	.01
# of students known personally	15.88	13.69	29.00	16.90	12.29	.25
Communication w/ teacher (1-5)	3.72	3.10	3.88	3.65	3.56	.12
Teacher is in same house (0-1)	.61	.00	.67	.80	.00	.00
Communication w/ administrator (1-5)	3.27	3.00	3.36	2.88	2.89	.32
Administrator is in same house (0-1)	.55	.06	.56	.30	.00	.00
Communication w/ counselor (1-5)	2.77	2.58	2.84	2.70	2.68	.97
Counselor is in same house (0-1)	.65	.06	.78	.80	.00	.00
Influence on curriculum (1-4)	2.99	2.64	3.13	3.18	3.18	.13
Influence on resources (1-4)	1.75	1.69	2.07	1.72	1.79	.58
Morale (1-2)	1.64	1.73	1.79	1.56	1.70	.28

* Numbers in parentheses indicate score range

obtained for the loosely structured house/small school and no house types. Teachers' comparatively weak interaction with the house administrator supports the house assistant principals' assertion that their authority was limited by departmental assistant principals outside the house.

Involvement in decision-making. Teachers' ratings of their influence over decisions related to classroom instruction indicated they had a moderate degree of input on average. Teachers felt they had a good deal less influence over resource allocation; their ratings tended to reflect less than minor input. None of these scale scores showed statistically significant variation across house type.

Job morale. Teachers' morale generally appeared to be above average; scores did not differ across house type.

Finally, we compared the extent of teachers' professional experience across house types. Length of experience varied from a low of 1.56 in the tightly structured/intermediate size school to a high of 3.12 in the no house type on a scale of 1-4, a statistically significant difference. The finding agrees with administrators' frequent lament that the older, more experienced teachers were not inclined to give up their upper level courses to teach exclusively within the 9th grade clusters that were organized in the tightly structured houses.

Discussion of teacher effects. The design of the tightly structured houses appears to have had a stronger impact on students than on teachers. The only demonstrable effect of the tightly structured houses was teachers' greater familiarity with students' all-around academic performance, albeit an important outcome and one that is almost certainly attributable to the interdisciplinary instructional teams operating in these houses.

The failure of the tightly structured houses to enhance staff collegiality and input into decisionmaking throws some of the limitations of their design into sharp relief. As discussed in the previous section, house management was weak in all the house systems. Houses enjoyed little autonomy, and house staff were not empowered to respond directly to issues arising within the house. Moreover, the interdisciplinary teacher teams, while providing an important new context for professional exchange, were weakened by their conflicts with the academic departments. In sum, these findings suggest that the better designed houses have realized some but not all the potential benefits of a house system.

III OBSERVATIONS OF STUDENTS' DAYS

In addition to interviewing school staff and collecting quantitative data from teachers and students, we conducted systematic observations of students' days in school. The observations permitted us to view house systems from a very important perspective, that of the students' daily experience in school. From this vantage point, we were able to gauge the extent to which house systems effected changes in the larger context of schooling that penetrated the classroom, where, ultimately, house systems must be felt to make a real difference. We also used the observations to become better acquainted with the conditions under which instruction occurs and to explore the implications of these conditions for other needed reforms.

Method

A research associate, trained as a teacher and observer, observed at least two students in each of the four study schools. In all, the observer accompanied nine students through 115 classes taught by 55 different teachers.

The observer met initially with house coordinators and teachers to ask them to identify three to four 9th grade students, males and females, who were neither the least nor most able, with reasonably good attendance for observation. She then met with these students to finalize selections, typically a male and female in each school. She returned to shadow each student for two or more days over a period lasting up to two months.

The focus of observation was the student's verbal and non-verbal behavior as well as that of his/her peers and teachers, the physical environment, and time of day in each of the settings which the student entered over the course of the school day, including hallways, classrooms, and cafeteria. The observer did not use a pre-set category system to select what to observe other than her highly relevant experience as teacher and one-time student; rather she employed an emergent approach to observation in order to be maximally sensitive to the unique and unpredictable features of the settings in these schools.¹⁶

All names appearing in the observation notes excerpted below are fictitious to guarantee anonymity.

¹⁶ Eisner, E. (1986). What high schools are like: Views from the inside. Stanford, CA: Stanford University.

Observed Effects of House Systems on Students'
and Staff's Day-to-Day Functioning

Broadly speaking, the observations revealed that the more complete house systems had limited, yet important effects at the level of classroom activity. The more striking effects on classroom activity were attributable not to schools or house designs, but to a handful of teachers who were no more likely to be found in the tightly structured houses than the others. The contrasts between classes instructed by these teachers and other classes are described later on. The two most significant classroom outcomes of house systems are discussed below.

Staff collaboration. In the tightly structured house systems in place at Bronx Intermediate and Brooklyn Large, collaboration among staff, including teachers and guidance personnel, was more evident. The observer noted several instances of teachers' calling on support staff to help with a class disturbance and upon one another for pointers between classes where house teachers taught in one area of the building; in the loosely structured houses where classrooms were not situated proximally, this was never noted.

This finding suggests that staff in the tightly structured houses had an increased capacity to call upon one another for support in a convenient and timely manner. The following observation notes illustrate vividly:

The teacher pauses in the session and goes out into the hall. . . . When the teacher returns, it is with the counselor. The counselor stands at the door and looks at one student: "Julia, let's go." With very little fuss the girl gets up, but as she does so, she turns to the teacher and says, "I hate you." The teacher says "Sorry," but obviously looks as though he is not thrown by this, or vacillating in his own mind. Julia and the counselor leave, and the teacher closes the door behind them. The students work at their essays. The teacher moves around the room, looking at students' work, available for the occasional question . . .

The above episode is all the more noteworthy considering the extraordinary amount of class time that was lost during teachers' isolated and very often ineffective attempts to quell disturbances as discussed below. In instances like these, the house system led to more appropriate use of staff and less time away from instruction.

Amount of class time. There were two ways in which the tightly structured houses affected the amount of time teachers actually spent on instruction. First, the clustering of classrooms resulted in some reduction in the number of students who arrived late to classes. Whereas late arrivals were a ubiquitous and vexing feature of classes everywhere, students who had to walk

a few steps to reach the next class were more likely to arrive on time than students having to traverse vast corridors:

Outside the doorway the student half turned to me and over her shoulder told me that we go to DuChamp now. And we did. We went right in. Remember, the doorways are just inches apart. . . . A number of students are already in the room, and more arrive by the instant. After just a moment more of waiting, DuChamp begins to address the whole group: "Good morning, good morning. Gentlemen wearing hats may please want to remove them." Every boy wearing a cap, as well as one boy in a cap just coming through the doorway, removes them. . . . DuChamp paused for a moment as the bell rang, and then continued. "First, I want to thank you for coming in."

Second, the double periods that were more often scheduled in the tightly structured houses had a marked impact on the teacher's ability to work at a more leisurely pace and with individual students. Very often the lengthened class time was used to let students work through an exercise and then discuss it. It was also clear that double periods were demanding of teachers and students and that unless the increased flexibility they afforded was taken advantage of, they could be difficult to get through. In some cases, a short "official period" fell between the two periods, causing many students to lose any connection they had made to the class. In these cases, valuable time was lost in restarting the class, and the advantages of a double period were diminished.

The episode below shows how the teacher was able to make good use of a double period spent in the library; he worked in a flexible manner with a large number of class members, in groups and individually, as they went about researching a topic in the library:

The teacher talks with Susanna. She has chosen Marilyn Monroe as her subject, and together they snag the librarian and ask her how they might find some sources on the movie star. . . . The teacher who was perched on the edge of Minnie's table . . . has come over to our table and is standing, talking with three girls about one portion of the assignment. They are puzzled about how to answer a question concerning the social status of their subjects. . . . The teacher is called away by another student for a minute, but now returns and sits in the empty chair next to Davona. Davona's subject is Althea Gibson, and the teacher asks her question after question about the woman. He tries to pull out the point in such a way that it becomes Davona's as well, that Gibson broke ground as an athlete who was a woman, opening a door for other women to follow through after her. . . . Michaela returned just then, and handed the hall pass to the teacher who in turn passed it to Roberto and told him, "You have two minutes." Off the fellow went. And he was back promptly. He gave the pass to the teacher, and when the teacher asked how his work was doing, he

said he had finished his assignment. . . . The bell rings. There is a momentary flutter as several students move, forgetting that they are here for a double period, but they orient themselves quickly. A few do decide to take a break, and in this library environment it seems to be permitted.

Qualities of School Experience

In order to come to grips with significant qualities of school experience and the lessons they may hold for educational reform, we attempted to identify the dominant features of students' interactions with the school environs. Dominant features were operationalized as patterns of behavior or experience which repeatedly emerged in the fine-grained observation notes. The identified features were checked against the observer's overall impressions. Most features were overwhelmingly prominent and negative given that so many classes yielded minimal, productive work time; and they are all highly interrelated. Each feature is described and illustrated with observation notes below.

Student disruption/teacher control attempts. The most striking feature of classroom activity was a pattern of student-teacher interaction consisting of students' distracting behavior, often coupled with unsuccessful efforts on the part of the teacher to control it; only a fraction of classes departed from this pattern.

Students' behavior seemed to reflect students' low level of engagement in and passive resistance to the task at hand; only when the teacher persisted with demands for the students' compliance did students sometimes respond with open hostility. Teachers generally responded to students with efforts directed at containing their behavior and creating a semblance of control; much less frequently, teachers attempted to gain students' full compliance. In this way teachers were able to maintain a degree of focus on instruction despite repeated, brief interruptions.

Each class period presented teachers with the dilemma of needing to preserve class time for instruction versus needing to take time to respond directly and consistently to individual students' behavior in order to preserve order and authority. As the observation notes below show, the middle course teachers took involved significant trade-offs to both instruction and order.

(Class begins at 9:45.)

9:45

One door bangs open as three girls come into the room. . . . Kids are slowly meandering into the classroom and mainly heading to seats at the back of the room. The tall boy comes in

and heads to the back of the room, commenting as he moves along. . . . He stands, other students stand, chatting, jackets left on. There has been no direct communication between the teacher and any of the students. The teacher has made a few weak overtures to the group about "settling in." Now she comes on strongish -- settle in and pay attention or she will give out sheets to work on. This has no effect, and after another minute or so, she begins to hand out worksheets with a cold, silent face, telling them they have 20 minutes and then to hand them in. There is still a comment here, a question there about (an unrelated activity. The teacher responds,) "if I am interrupted one more time, it is a test." . . . Sylvester gets up, announcing he needs to go to the bathroom. The teacher says not now, he pauses but then he heads out the door and is gone. The teacher does not comment, turns away from his departure . . . putting on the face that she simply did not see him disobey. The student was gone for a very short while. He came back in, and there was Janis also. She smoothed her way across the room into a seat, and the teacher neither looked at her or made a comment. She did look at Sylvester and said something about how she could give him a cut for his behavior. He replies in a soft but perfectly audible voice, "So give me a fucking cut." He takes his seat slowly, carefully, and settles in as if he will not be thrown by the conversation. The teacher says not another word to him.

10:05

This is the moment when I feel that we are settled in, in our seats, and as together as a group as we will be this period.

Although teachers often feel that students bring in an "attitude" that is unfavorable to classwork, the observations indicate that reason enough for their behavior exists in the classroom. The work, itself, very often seemed to lack inherent interest:

This is a smallish room, at least it feels small, crammed as it is with two long rows of wide tables bearing IBM PCs. There were 12 boys and 3 or 4 girls in the group. The teacher bustled and moved all period and had a paraprofessional working with her, and still there was not a great deal of individualized attention for the students. One of the last students to come in is a boy named Manuel. . . . It takes a minute to find him a machine. It is already pretty crowded in here. . . . The class began with fingering exercises on the computer keyboards -- but with the machines turned off! I could hear a commotion from some student somewhere in the room, but could not see who, because the machines block big portions of the rest of the room from view. But I could see that it was not the very big guy I had been sitting right next to earlier in the period. But the teacher, perhaps because many times he is the source of commotion jumped on the case, and yelled out for this boy to cut it out. Darnelle made some faint protest. This made no impression on the teacher

who was onto other things. Worth noting, within the next few minutes, Darnelle burst out into song, in full voice, as he sits over his fingering exercise. The teacher has begun to hand out diskettes, and it takes her another minute to respond to Darnelle -- "Stop singing. Concentrate on what you have to do." Once the students all had disks and had been helped to boot up, the teacher came back to tell me a little about what she was doing -- that this work was to combine practice in reading and typing. She told me she had to scrounge up the disks herself, and reformat them. Now they are doing a drill with punctuation signs, and that then they would be going on to reading. Darnelle calls out "this is frustrating." He felt free to say it, and the teacher called back in what sounded like a sympathetic tone. She turns back to me and says there is a certain amount of drill involved. . . . She told me that the disks also contained some games she had found that the kids enjoy, and asked me to come take a look. She asked Louis who was going through the punctuation drill if she could use this machine for a minute. She went to another file on his diskette and a game came up on the screen. She began to play it out. Louis and I watched. And it did look like fun. She quit, and returned to the drill and moved out of his way. He never had a chance to touch the game. After the teacher leaves me, she goes over and talks with Louis, asking him what is the matter. "I'm tired," he replies. But the teacher has been distracted by something she sees at another seat, and calls out, "What are you doing?" as she barrels away to the site. A few minutes later Louis calls out to the teacher, who approaches. He asks her what some keys are, and she talks to him for a moment. Then it is time to collect the disks. Just as in the beginning of class, the kids have to sit there with nothing to do while the disks are collected one by one.

Dampening physical environment. As is apparent in the notes above, the physical environment and available resources often contributed to uninvolving and frustrating classroom experiences. Classrooms and hallways were, by and large, unattractive and poorly maintained and sometimes posed real barriers to effective functioning. This fact of school life was documented across all the study schools. The following notes were made in the same school.

We head down the hall. About to turn into the central stairwell, we see that it is still blocked off and soaking wet with water leaking into the building from the rainstorms outside.

It is cold in this room. Ten of the students have their jackets on. So do I. . . It is a big classroom compared to (the previous one), and the walls are in much better shape. It does not feel like a science room, and while there are some charts on the walls, there are no lab equipment or tables. The end of the room looks unused. . . The sound of the rain and wind

pounding on the windows grows much louder just now, and the three or four rows of students in this side of the room seem keenly aware of this change. One student makes a quiet comment -- wondering if the glass in the windows will break. Another student quietly says, "Calm down." But none of the faces I see turning towards the windows looks at ease.

And in another school:

The set-up of the room began to come into focus: Five rows of rather smallish desks bolted to the floor. It could be a charming room, but the walls were painted a dreary color. The floors might have been sanded within the past year or so, but needed a good cleaning and waxing, at the least. . . . The teacher has moved to one end of the lab table, and stands in front of a bell jar with a candle inside it, and some kind of motor thing next to it. A vacuum pump, I hear. The teacher begins to fuss with getting the apparatus to run. And then it seems that something is not right here, and it does not start. The teacher fusses some more and then she says, "I don't feel like being electrocuted today -- what about tomorrow?" A student voice responds, "Maybe tomorrow." There are a number of conversations going in the classroom, two boys here, two boys there, a small group of three girls and a boy; the hum of conversation is a steady undertone in the room. We hear the dulled down sound of a school bell ringing, and this sets off a ripple of motion throughout the group. The teacher spoke up, "This is not our bell". . . . (The students) are ready to leave, they are gone? The teacher fusses with the pump, and there is a piece of equipment with a bell. The bell rings, keeps ringing. The vacuum pump is not working. If it were, for some reason, it would cause the bell to stop ringing. But it does not work. "Unfortunately, this seal on the bottom of the jar is broken". . . . Another school bell rings, but this is not theirs either. However, the students begin to wriggle even more, and clearly they are dislodged from whatever focus they might have had on their work.

Poor verbal self-expression. In classes in which teachers successfully interacted with students about the topic at hand, it was painfully apparent that many students were able to express themselves only in short phrases or disconnected words and were unskilled at stringing together several words into a sentence. Many students, of course, were first or second generation immigrants from countries where another language was spoken, Spanish, French, patois. Some students' obvious lack of self-confidence in class contributed to their contorted responses to the teacher's inquiries. But both inside and outside class, students demonstrated a poor ability to articulate ideas.

The teacher begins the lesson immediately. "What is automation? Raoul?" Raoul's first reaction is "I don't know," but the teacher urges him on, and Raoul kind of stutters a bit,

and then he says something about machines now taking the place of people. The teacher breaks into a slow wide smile and says, "Look at this guy. Said he doesn't know and then listen to this answer." . . . The teacher: "Can anyone tell us their understanding of what technology is? Ralph?" Ralph: "Technology --" There is a long silence; the teacher encourages him to try it. But nothing comes. The teacher: "Raoul?" Raoul: "Something new." Ralph: "Something that you use." . . . The teacher next asks students to name types of technology. Raoul: "Walkman." Carlos: "Computer." "Very good," says the teacher. The list is quickly lengthening now. . . . The teacher asks the class, "What do they all have in common?" Someone throws out the word, wire. Then Elton speaks up: "Machinery." The teacher has begun a chart on the board (listing types of technology and their effects). The teacher asks the students what they would add as an effect of airplanes. Marlana answers, "far travel distance." The teacher slightly expands and restates Marlana's point without questioning her way of saying it. . . .

Student resilience. These largely negative accounts of classroom activity tend to obscure another commonly observed, yet positive feature of school life: the expressions of energy, curiosity, and warmth on the part of students. These attributes amount to a kind of resilience in the face of students' disadvantaged backgrounds and frustrating classroom experiences.

Student resilience was most evident in the contrast in behavior of students as they went from a string of uninvolved classes, where they showed an enormous amount of obstructiveness, into a highly absorbing class, where they readily settled in to the task at hand, or into the hallways, where they made quite charitable appraisals of teachers and engaged in friendly banter with students and teachers alike. Students' reactions to the observer were also extremely telling; they showed openness and curiosity and, on this basis, revealed a good deal of self-esteem.

In class, students frequently hesitated or failed to respond to teacher queries out of fear of looking foolish. At the same time, when criticism was handed out in an especially frank manner by a well-liked teacher, students responded with diligence and humor.

The following excerpt illustrates how one of the observer's student guides, a boy who was not always regarded favorably by his teachers, handled lunch in the teacher's cafeteria:

Evaughn chooses our seats -- at a long table at which two or three teachers are seated. . . . A man -- tall, late 40's, approaches the table with a tray. An accounting teacher? Evaughn greets him heartily, and they commence with a kind of banter which implies a long acquaintance. Evaughn tells me that he often goes and sits with him at lunch time. I think Evaughn said the teacher oversees the running of the student store. Evaughn's way of talking appears to be self-assured, and contains a degree of familiarity which seems to me

to reach towards a posture of equality with the adult, and a degree of testing and aggression. I am reminded of the way in which Evaughn pulled at and raced ahead of (the gym teacher earlier in the day).

Discussion of school experience. Although teachers and students often engaged in a no-win battle for control of the classroom, teachers' general inclination to get on with instruction, while ignoring or attending to only the most obvious disturbances, is sound. The problem lies not so much in the teachers' inept disciplinary tactics, but in their ineffective approaches to instruction. Teachers who managed to hold students' attention demonstrated that they were no more effective at discipline, per se, than others, but were able to engender interest in the subject being taught. And it was this climate of interest and attentiveness that suppressed the number of students who acted out or the length of time they spent acting out.

The teachers who succeeded in riveting students to their classwork required students to take on active and meaningful roles to carry out their work. Students were asked to help each other, to share with the class as a whole, to practice expressing their thoughts verbally and in writing. Opportunities such as these seem especially important to students' development in the light of their poor verbal skills.

In contrast, teachers who asked students questions with preset answers, not just to hear students recite facts, but in an attempt to get a conversation going, to get students to articulate what they knew, required only a gratuitous kind of participation. That kind of exercise tended to intensify students' sense of risk of failure as well as their resistance to being manipulated at a developmental point when asserting their independence has become central to defining themselves.¹⁷

The last point brings us back to the observation of students' and teachers' struggle for control. Students' disruptive classroom behavior can be viewed as an understandable and even healthy expression of their stage of development, even though this behavior is misdirected and ultimately destructive. Viewed in this light, students' behavior in class is consistent with the observation that many students possess a relatively high level of self-esteem.

¹⁷ Mergendoller, J. (1982). To facilitate or impede? The impact of selected organizational features of secondary schools on adolescent development. In F. Newmann, & C. Sleeter, (Eds.), Adolescent development and secondary schooling. Madison, WI: Wisconsin Center for Education Research.

Although low self-esteem is frequently cited as an important target of intervention with at-risk students, a label which can be applied to nearly all of the students in the study schools,¹⁸ our observations indicate that many students are able to draw on a reservoir of positive self-regard. Our paper and pencil measures of self-esteem also support this notion; student self-ratings were more often positive than negative and similar to those obtained from a sample of parochial school students.¹⁹ All of this is to say that students have resources which can be rerouted to more positive ends as we saw a few teachers able to do.

Staff development is clearly needed to help more teachers engage students constructively. Key to this is placing skillful teachers in positions where their knowledge and abilities can be readily tapped by less skilled teachers. Our assessments of the interdisciplinary teacher teams lead us to believe that the teams provide an especially useful context for achieving this. The team structure gave team members shared responsibility for a group of students which allowed them to work jointly on strategies for reaching students in addition to the content of the curriculum. In this way, teams constitute an important adjunct to the more curriculum-oriented academic departments.

Finally, the importance of the physical environment to effective instruction is obvious. Whereas a reasonably attractive and well-maintained environment is considered a basic ingredient of an effective workplace, teachers and students are expected to achieve their goals in spite of their environment. Teachers and students would be well within the bounds of fairness and reason to demand that they be supplied with these basic amenities in exchange for the "results" so often demanded of them.

The ramifications of an inadequate physical environment are enormous. First, the aged and poorly maintained equipment at teachers' disposal made instruction even less effective than it might have been. A condemned auditorium and inadequate computer resources blocked some instructional objectives altogether. The deteriorating classrooms and hallways seemed to add to students' insecurities in some cases and to be a frequent source of distraction. And how many teachers can continue to take their work seriously when their basic needs are underestimated or overlooked?

¹⁸ Oxley, D. (1986). Effective dropout prevention: The case for schoolwide reform. New York: Public Education Association.

¹⁹ Harter, S. (1986). Self-perception profile for adolescents. Denver, CO: University of Denver.

There is another dimension of the inadequacy of the physical resources found in these schools: Students have very limited claim to any space in the school, no home base to retreat to, except where house design carved it out for them. Students in elementary school have their classroom and desk; students in suburban secondary schools usually have lockers, a student cafeteria and/or auditorium where they can relax and socialize. Security concerns ruled out lockers in the study schools, and many students avoided the cafeteria because it was loud, unpleasant, and considered dangerous; they preferred, instead, to spend lunchtime in the back of an occupied classroom or in the teachers' cafeteria when they could.

Spaces which can be at least partially controlled by students provide identity and autonomy,²⁰ again, basic ingredients of healthy development and functioning. It is worth speculating whether classtime offered the best opportunity to socialize in the study schools and whether the provision of a student area, alone, would reduce class disruptions.

A profile in learning. Classes that worked well were the source of several insights about effective instruction. Only the problems presented by the physical environment were not (and cannot be) at all addressed within these classrooms. The observation notes made in one these classes enliven many of the points made above and are presented here as a concluding "note" of optimism for this report.

In the English class described below, note how the teacher holds most of the students' attention despite attempts by late arrivals to disrupt the class; how the teacher channels students' interest in their peers into effective group work without having to spend a lot of time on controlling the groups; and, finally, how the teacher provides opportunities for writing, reading out loud, verbalizing, and listening to and reflecting on language.

The bell has only just rung. At the teacher's request, the desk/chairs have been shuffled around into small clusters, and the students are settled into small groups. The teacher is talking to (the students) about what he would like them to work on today. Each group will take a poem and turn it into a story. They will be asked to tell what happened in the poem and to respond to it in some way. For example, in one poem they read there is a line which can be translated to: The boat is crying. The teacher suggests that one question to ask at this point is: Will it find its way? LaVerne's voice is heard loud and strong, "Yes!" The teacher recognizes this (response) by glance but says nothing to LaVerne. The teacher is perched up on the table top of one desk/chair. He is there for a moment, then he shifts to another spot, may stay a bit longer there, but then on to a different perspective. The

²⁰ Brown, B. (1987). Territoriality. In D. Stokols, & I. Altman, (Eds.), Handbook of environmental psychology. Vol. I. New York: John Wiley & Sons.

students shift in their seats to be able to see him wherever he is, and he has their full attention. The teacher reads some examples of work from a class that worked on the same assignment the period before. No names, but these are all well known classmates. The students listen, some by glance and expression appear to be listening deeply, emotions pass across faces, they are fully there. Garnetta opens one of the two classroom doors and comes in, leaving the door slightly ajar behind her. She heads for a seat near two of her girlfriends and begins to speak to them in a quiet, but urgent voice. She is full of gossip from the hall, and the girls are eager to hear. The teacher moves over to her, then says something about how he was warned she would be late to class today. The two other girls turn back to the group focus, leaving Garnetta rather at loose ends. In a minute she is up, at the door, and peering out into the hall again. "Garnetta, are you testing out your new glasses?" Garnetta pulls her head back into the classroom. "Shut the door," says the teacher. Garnetta complies, and looks as though she is heading back to her seat, when she turns again, heads for the door, opens it, and is out, gone. . . . Garnetta is followed by the teacher who has grabbed her attention calling her in. Again, she complies, and this time, the teacher is at the door and shutting it firmly as Garnetta heads for her seat. Within a few minutes the small groups are working quietly together. . . . Lamont comes into the room. The teacher (says), "Join this group." The teacher motions to (a boy who is working alone). Lamont begins to go on about how he would like to sit with Yvette, "We're cousins." Yvette's face registers a startle and a slightly inflamed look of mild indignation, and it is as if she says this is news to me. And she turns in her seat, presenting her back to Lamont, and begins to talk to her group as if nothing was going on behind her. The teacher sticks with Lamont, gets him to the seat with the other boy, and talks with them for a minute. At one point he looks up and over at a group across the room, whose members sit back in their seats and seem to have no steam. "You're way over there," he says to one of the boys in the group. "There is no group, there is no focus." The students in the group seem to respond to this -- the word, focus, did something. They pull their chairs together and begin to talk in a huddle. After a while, the teacher asks Robert's group how it is going. They seem to have finished. "Read it to Lamont," says the teacher. One student reads. When he is finished, the teacher pauses for a moment as if in contemplation -- there is a certain theatricality in his style -- and then he speaks: "It's dull, dull, dull." The other groups paused to listen in, without losing the shapes of their small groups, returning to their conversations more or less quickly after hearing the teacher's pronouncement. The teacher talks to Robert's group and pulls on a strategy of getting them to talk about something that happened to one of them that might enrich their view of the images or statements in the

poem they are tackling. With this completed, the teacher returns to Lamont and his partner and asks them if they like the story told by the group. "Yes." "Why?" They talk quietly. The teacher calls Montez to him, and they go out into the hall for a minute. The groups hang together, the conversations go on. And there is paper and pen at the center of focus of each group, and they all look as though they are indeed focused on the assignment. The teacher and Montez come back into the room, and after a very brief scanning of the room, the teacher announces that in about seven minutes he will be collecting the exercises and reading them back to (the class). He spends those minutes moving from group to group, and the students seem to be having absolutely no problem either working in groups or staying focused and on topic. The time has come to read the students' work. The teacher reads one student's. I did not keep notes on the content, but when he finished reading, we all broke into smiles of pleasure. It was great, and we applauded him. The next piece to be read got applause also, out of a sense of comraderie, after it was recognized that it was "awful", "terrible." Everyone could hear why it was bad, but it got applause. "That wasn't so good, was it?" and so on through the readings. It was fun, easy and gratifying for everyone -- and everyone remained really present to the experience. After the applause for the last piece died away, and the last comment was made, the teacher asked everyone to be sure to notice the homework assignment on the board. Again, the bell was not ringing, and the teacher released us with a "See you later." I walked out of the room and said to the boy who happened to be nearest me that I had really enjoyed that. He told me that the teacher was the favorite teacher for many of the students -- obviously him included.

APPENDIX A

Psychometric Properties of Study Measures

Measure	Mean	Standard Deviation	Coefficient Alpha
Know students	3.09	.63	.76
% Teachers known	.28	.15	.66
Know house coordinator	1.47	.25	.62
Know asst. principal	1.16	.17	.60
Know grade advisor*	--	--	.73
Know guidance counselor	1.43	.32	.74
Know paraprofessional*	---	----	.81
# of extracurriculars	5.35	5.54	--
Self-esteem	2.91	.71	.74
Sense of community	.23	.42	--
Have cut classes	1.42	.5	--
# days absent	11.42	11.91	--
Average grade	65.66	12.23	--
# credits	3.99	2.21	--
Was promoted	1.57	.5	--
# Students/advice	6.66	7.75	--
# Students/academically	25.16	25.17	--
# Students/personally	16.40	18.31	--
Communication w/ teacher	3.58	.82	.88
Communication w/ admin.	3.10	.77	.88
Communication w/ counselor	2.72	.99	.89
Teacher in house	.4	.49	--
Admin./ in house	.31	.47	--
Counselor/in house	.43	.5	--
Influence on curriculum	3.01	.63	.80
Influence on resources	1.78	.56	.78
Morale	1.68	.25	.76

* Comparable statistics cannot be computed